

Listing of Claims:

This listing of claims replaces all prior versions and listing of claims in the application.

Claims 1-9 (canceled)

Claim 10 (currently amended) An isolated and purified nucleic acid molecule, ~~or nucleic acid molecule complementary thereto~~, comprising a nucleotide sequence encoding a persephin polypeptide, wherein the persephin polypeptide

(a) comprises an amino acid sequence which contains amino acids at positions indicated in parentheses: seven canonical framework cysteine residues, Cys(1), Leu(3), Val(10), Leu(13), Gly(14), Leu(15), Gly(16), Tyr(17), Glu(21), Phe(25), Arg(26), Tyr(27), Cys(28), Gly(30), Cys(32), Leu(44), Leu(47), Cys(58), Cys(59), Pro(61), Asp(66), Phe(69), Leu(70), Asp(71), Ser(83), Ala(84), Cys(87), and Cys(89), said positions being identified by alignment with SEQ ID NO:223,

(b) has at least 85~~75~~% sequence identity with SEQ ID NO:223, and

(c) promotes survival of mesencephalic neuronal cells.

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Claim 11 (canceled)

Claim 12 (currently amended) The isolated and purified nucleic acid molecule ~~or nucleic acid molecule complementary thereto~~ of claim 10 comprising SEQ ID NO:199 or SEQ ID NO:201.

Claim 13 (currently amended) An expression vector comprising ~~expression regulatory elements operably linked to~~ the nucleic acid molecule of claim 10.

Claim 14 (previously amended) An isolated host cell transformed with the expression vector of claim 13.

Claims 15-27 (canceled)

Claim 28 (currently amended) The isolated and purified nucleic acid molecule or ~~nucleic acid molecule complementary thereto~~ of claim 10, wherein the persephin polypeptide comprises SEQ ID NO:223 or a conservatively substituted variant thereof.

Claim 29 (currently amended) The isolated and purified nucleic acid molecule or ~~nucleic acid molecule complementary thereto~~ of claim 10, wherein the persephin polypeptide consists of SEQ ID NO:221 or a conservatively substituted variant thereof.

Claims 30-33 (canceled)

Claim 34 (currently amended) ~~An non-naturally occurring~~ isolated nucleic acid molecule or ~~nucleic acid molecule complementary thereto~~ comprising a nucleotide sequence encoding a polypeptide wherein the polypeptide

52 (a) comprises an amino acid sequence which contains amino acids at positions indicated in parentheses: seven canonical framework cysteine residues, Cys(1), Leu(3), Val(10), Leu(13), Gly(14), Leu(15), Gly(16), Tyr(17), Glu(21), Phe(25), Arg(26), Tyr(27), Cys(28), Gly(30), Cys(32), Leu(44), Leu(47), Cys(58), Cys(59), Pro(61), Asp(66), Phe(69), Leu(70), Asp(71), Ser(83), Ala(84), Cys(87), and Cys(89), said positions being identified by alignment with SEQ ID NO:223,

(b) has at least 8575% sequence identity with SEQ ID NO:221 or SEQ ID NO:217, and

(c) promotes survival of mesencephalic neuronal cells.

Claim 35 (currently amended) ~~An~~ expression vector comprising ~~expression regulatory elements operably linked to the nucleic acid molecule or the nucleic acid molecule complementary thereto~~ of claim 34.

Claim 36 (currently amended) ~~An isolated host cell which produces the non-naturally comprising the occurring nucleic acid molecule or nucleic acid molecule complementary thereto of claim 34.~~

Claims 37-40 (canceled)

Claim 41 (new) An isolated nucleic acid molecule comprising a nucleotide sequence fully complementary to the nucleotide sequence of claim 10.

Claim 42 (new) An isolated nucleic acid molecule comprising a nucleotide sequence fully complementary to the nucleotide sequence of claim 12.

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Claim 43 (new) An isolated nucleic acid molecule comprising a nucleotide sequence fully complementary to the nucleotide sequence of claim 34.

Claim 44 (new) A method for producing a persephin protein comprising transfecting an isolated cell with the expression vector of claim 13, culturing said cell, and isolating persephin protein from said cell.

Claim 45, (new) A method for producing a persephin protein comprising transfecting an isolated cell with the expression vector of claim 35, culturing said cell, and isolating persephin protein from said cell.
